areas, small sharp black bristles on under surface of hind femur and triangular yellow spur-like structure on lower part of same.

Abdomen black, first tergite with extreme lateral border yellowish; tergites two to five, each with two yellow bands, one sub-basal and one apical. First, second, fourth, sixth and eighth bands entire; third, fifth and seventh bands interrupted in middle. First, third and fifth bands broadened laterally, rest of bands uniformly wide. Sub-basal and apical bands narrowly confluent in lateral borders of second and third segments but markedly separate in fourth and fifth segments. Black pubescence on black areas and yellow on yellow markings except black pubescence on median and posterior margin of sixth band and all over on eighth band.

*Holotype Female.*—MARY'S RIVER, OREGON, 9 September 1917 (Mecham), from the California Insect Survey Collection, University of California, Berkeley; to be deposited in the California Academy of Sciences.

This species comes close to *S. liturata* Williston in the yellow markings of the thoracic tergum but can be easily distinguished by the first yellow band being entire and by a yellow spot present in the mesepisternum. In *S. liturata* the pteropleuron is entirely black and the first band widely interrupted in the middle.

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## A New Species of Aphid from *Rubus parviflorus* in California

(Homoptera : Aphididae)

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Some years ago (Hill, 1962) help was requested from entomologists in North America in obtaining further specimens of a new species of aphid from *Rubus parviflorus* Nutt. to which my attention had been drawn by Dr. R. Stace-Smith of Vancouver (Hill, 1958). In 1964, Dr. Hille Ris Lambers sent me examples which he had collected from *R. parviflorus* at Berkeley and San Francisco, California, in 1963. On examination, however, these were found not to be of the species in question but of yet another new species.

### **Amphorophora pacifica** Hill, new species

ALATE VIVIPARA.—(N = 13). Color, shiny very pale greenish white. Wings clear without dusky apical spot; the veins show no dark borders. Body length 2.49–3.1 mm; width across abdomen 1.05–1.28 mm; width of head across eyes .48–.55 mm. Antennal length 3.3–3.8 mm; III, .66–.86 mm, with 14–20 round rhinaria arranged linearly along 7/8 of the length of the segment; IV, .59–.71 mm;

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V, .53–.63 mm; VI, .17–.18 mm, plus .99–1.19 mm; longest hairs on IIIrd segment equal to the basal diameter of that segment. Rostrum reaching to the hind coxae, IV + V, .2–.215 mm, with 14–21 hairs. Hind tibia 2.32–2.74 mm, dusky distally; second joint of hind tarsus .115 mm, with few spinules on the imbrications. Hairs on abdominal tergite II equal to or slightly longer than the basal diameter of antennal segment III; 5–6 hairs on abdominal segment VIII. Siphunculus pale with dusky apex, very nearly smooth with a few striations just below the flange, and very faint imbrications on inner side of swollen part and near the base; length .65–.82 mm, maximum width .08–.1 mm, minimum width .04–.06 mm. Cauda, length .26–.32 mm with 6–10 hairs.

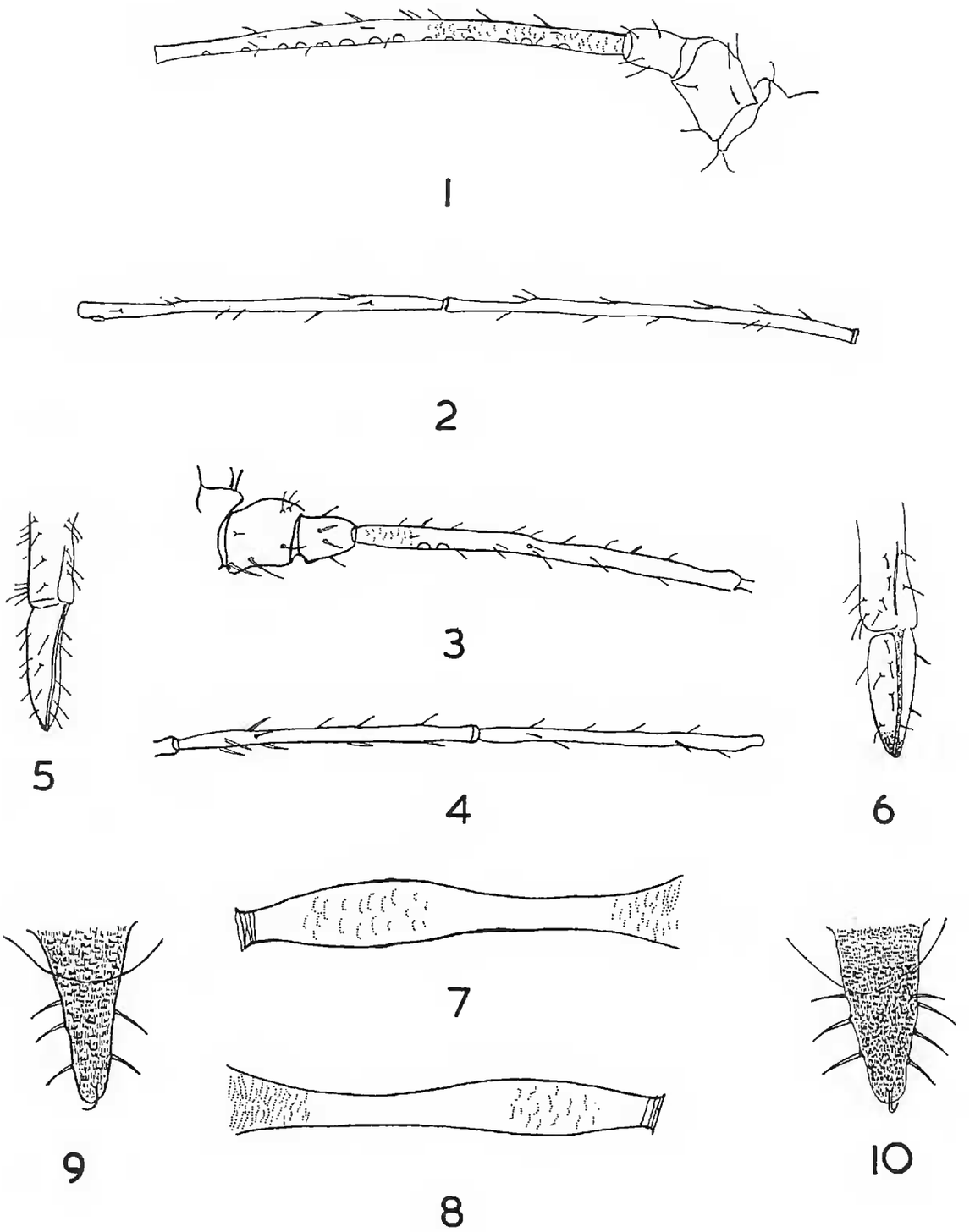
*Type.*—Collected on *Rubus parviflorus* Nutt. at BERKELEY, CALIFORNIA, 27.XI.63, by D. Hille Ris Lambers. Holotype and paratypes have been deposited in the collection of D. Hille Ris Lambers, Bennekom, Edescheweg, 139, Netherlands. Paratypes also deposited in the Entomology Department, British Museum (Nat. Hist.), Department of Entomology and Parasitology, University of California, Berkeley, California, and in the author's collection.

APTEROUS VIVIPARA.—(N = 24). Color, shiny very pale greenish white with, down the dorsum, a bright green rather wavy line which becomes somewhat dotted past segment III or IV; vague similar lines are present laterally from the pronotum to about abdominal segments II or III. Body length 2.17–3.02 mm; width across abdomen, 1.11–1.62 mm; width of head across eyes, .49–.58 mm. Antennal length 2.63–3.27 mm; III, .63–.75 mm, with 0–6 rhinaria arranged more or less linearly along the proximal fourth of the segment; IV, .46–.58 mm; V, .41–.55 mm; VI, .14–.17 mm, plus .82–1.05 mm, longest hairs on antennal segment III equal to the basal diameter of that segment. Rostrum reaching to the hind coxae, IV + V, .2–.215 mm with 14–24 hairs. Hind tibiae, 2.03–2.48 mm, dusky distally; hind tarsus .094–.128 mm. Hairs on abdominal tergite II 1–1½ times the basal diameter of antennal segment III; 4–7 hairs on abdominal tergite VIII. Siphunculus pale with dusky apex and with a few striations just below the flange, and very faint striations on inner side of swollen part and near the base; length .67–.89 mm, maximum width .08–.13 mm, minimum width .04–.07 mm, cauda, length .29–.35 mm, with 7–11 hairs.

Paratypes were collected on *Rubus parviflorus* Nutt. at Berkeley and San Francisco, California, 1963, by D. Hille Ris Lambers.

BIOLOGY.—According to Hille Ris Lambers (in lit.) this species lives on *R. parviflorus* and overwinters as viviparae on young foliage at the top of older shoots. At other times it is to be found on the undersides of leaves.

DISCUSSION.—This species fits clearly into the genus *Amphorophora* in the restricted sense defined by Hille Ris Lambers (1949). Using his key to the European species of that genus it comes nearest to *A. rubi.* In Mason's key (1925) it appears to be either *A. evansii* Theobald or *A. takahashii* Mason. The former, however, belongs to the genus




FIGS. 1–10. *Amphorophora pacifica.* FIGS. 1, 2, 5, 7, 9. Alate vivipara female. FIG. 1. Antennal joints I–III. FIG. 2. Antennal joints IV–V. FIG. 5. Apex of rostrum. FIG. 7. Siphunculus. FIG. 9. Cauda. FIGS. 3, 4, 6, 8, 10. Apterous vivipara female. FIG. 3. Antennal joints I–III. FIG. 4. Antennal joints IV–V. FIG. 6. Apex of rostrum. FIG. 8. Siphunculus. FIG. 10. Cauda.

*Microlophium* and not to *Amphorophora* (Hille Ris Lambers, 1949). Compared with *A. takahashii* the present species shows the following differences: the femora are not black on the apical half, the siphunculi are of a distinctly different shape, and are longer than antennal IV, and more than 1.8 × the length of the cauda; the host plant is also different. In Palmer's key (1952) it runs down to *A. utahensis* K. & A. but according to MacGillivray (1959) that species is a synonym of *A. davidsoni* Mason which is, in fact, *Masonaphis* (*Oestlundia*) *davidsoni* (Mason) with some reticulate ornamentation on the siphunculi. In the key of Knowlton and Allen (1945) it runs down to *A. halli* Knowlton which was described from a single alate specimen only. It differs from that species, however, in the color of the siphunculi and antennal segments III, IV and V, in its longer rostrum, in the number of lateral hairs on the cauda, and in general body size.

*Amphorophora forbesi* Richards from *Rubus spectabilis* differs in having no secondary rhinaria in the apterae, by a rather distinct reticulated area at the apices of the much more slender siphunculi and by a much shorter last rostral segment.

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